

REMARKS

Favorable reconsideration of this application, as amended, is respectfully requested.

At the outset, Applicant would like to thank the examiner for the indication of allowable subject matter within Claims 3–5, 9, 17, 21 and 28.

Claims 11 and 23 were amended to comport with the scope of Claims 1 and 18, respectively.

Claims 1, 2, 6–8, 10–16 and 33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Vent (US 2,388,352) in view of Phillips (US 6,569,529), Hoshino (US 5,347,111) and Hudson (US 2003/0161017). Claims 18–20, 22–26, 29–32 and 39–44 were rejected as being unpatentable over Hudson in view of Phillips and Hoshino and Claim 27 was rejected as being unpatentable over Hudson in view of Phillips, Hoshino and Vent. Applicant respectfully traverses.

Vent discloses a certificate 10 provided with a photographic reproduction of a stress pattern 11 “as seen in a lens through polarized light” (Page 1, Col. 2:21). Certificate 10 folds over onto itself, and includes apertures 14, 15 in the certificate’s front and back faces 12, 13, respectively. Apertures 14, 15 are covered by polaroid skins 16, 17, respectively, so that polaroid skins 16, 17 are “back to back when the certificate 10 is in closed position and in alignment” (Page 1, Col. 2:47–49). Because the axes of polaroid skins 16, 17 are arranged at right angles to one another, when certificate 10 is folded and lens 18 is positioned between polaroid skins 16, 17 and held up to the light, the stress pattern in lens 18 becomes visible and “its shape can be compared with the shape of the stress pattern [11] pictured on the certificate” (Page 2, Col. 1:7–9). Differences between the stress pattern 11 and the appearance of the lens 18 through the polarizing skins 16, 17 indicate whether the lens 18 has been “toughened.” *See, also, FIGS. 2, 3.* Applicants submit that Vent fails to teach or suggest several features that are relied upon by the Office Action in its obviousness rejection of Claim 1.¹

Claim 1 is directed to a security document that includes a multilayer security element connected with a substrate so that it is visually recognizable at least from one of the two substrate surfaces. Vent, on the other hand, merely discloses two separate polaroid skins 16,

¹ *See, Office Action at Page 2.*

17, each of which is a single layer of polarizing material that is fastened over a hole, or aperture, in certificate 10. Applicant respectfully submits that Vent's single layer polaroid skins 16, 17 are not multilayer security elements, as recited by Claim 1. Furthermore, Applicant submits that Vent's polaroid skins 16, 17 are not "security elements," nor is his certificate 10 a "security document." At most, certificate 10 merely serves to identify whether the accompanying lens 18 is "toughened glass." *See, e.g.,* Page 1, Col. 1:6-13 ("The invention contemplates a method and apparatus for comparing the stress pattern in any one or more toughened glass pieces, such as toughened ophthalmic lenses with one or more reproductions of stress patterns, for the purpose of identifying the origin of the toughened glass under consideration and to ascertain the type of process used in toughening the lens") (emphasis added). Consequently, Vent fails to disclose all of the features alleged by the Office Action. Moreover, because Vent is directed to a device that is used to identify a toughened piece of glass, rather than a security document, Applicant submits that one skilled in the art would not consider Vent's teachings in combination with any of the remaining references applied against Claim 1.

Claims 1, 18 and 31 recite, *inter alia*, a multilayer, semitransparent security element that includes a multilayer interference element that produces a color shift effect and a layer with diffraction structures that at least partly overlaps the interference element, where the interference element has gaps in at least one layer and the diffraction structures directly adjoin the interference element. The Office Action relies upon an arguably contrived combination of Phillips, Hoshino and Hudson to defeat these elements in a piecemeal manner. *See, e.g.,* Office Action at Pages 3-7. Applicant respectfully submits that the Office Action fails to establish a *prima facie* case of obviousness because the cited references fail to teach or suggest all of the features recited by Claims 1, 18 and 31.² Applicant notes that the present invention provides specific optical effects by combining an overlapping diffraction structure layer and a multilayer interference element that produces a color shift thin film effect but has gaps, such that the "color shift effects are no longer recognizable in the areas of the gaps" (Specification at Page 13, lines 15-16). And, due to the semitransparency of the security element, additional effects in reflected and transmitted light, as well as unexpected color combinations, are advantageously obtained.

² *See, e.g.,* MPEP § 2143.03.

Phillips discloses interference flakes and foils that have color shifting properties. *See*, e.g., Abstract. The Office Action alleges that Phillips discloses a semitransparent security element in Col. 17:60–67. Applicant disagrees. Phillips discloses a foil 100 that is “transparent to light incident upon the surface thereof,” in order to provide “visual verification or machine readability of information below foil 100 on carrier substrate 102” (Col. 17:66 to Col. 18:2; emphasis added). Further, Applicant submits that Phillips fails to teach or suggest that his foil 100 may be semitransparent or opaque because anything other than transparent would clearly impede its stated purpose. Consequently, Phillips fails to disclose all of the features alleged by the Office Action.

Hoshino discloses an identification seal 3 for a card 1 that has a hologram layer 11 consisting of a hologram forming layer 11a and an underlying light reflecting layer 11b. Identification seal 3 is secured to the major surface 1a of card 1 using adhesive layer 12. *See*, e.g., Col. 3:39–51; FIG. 4. Applicant submits that Hoshino fails to disclose a semitransparent security element. At most, Hoshino teaches that hologram forming layer 11a is made from a polycarbonate or other material “having pronounced double refractive property” (Col. 3:46–47). Furthermore, Hoshino is apparently directed to a machine-readable security element, and not, as compared to the present invention, an element in which visually recognizable diffractive effects and color shift effects are combined. Moreover, Hoshino’s hologram layer 11 is manufactured using a stretching process,³ which is significantly different than the coating structures and substrates taught by Phillips. Consequently, Hoshino fails to cure the deficiencies of Phillips.

Hudson discloses a diffractive device 7, such as a “metallised” hologram, that may be laser-ablated to form variable depth cuts 1,2,3,4,5,6. *See*, e.g., FIG. 1; Paragraph 0064. When Hudson’s metallised hologram is cut, the metal is removed “to indelibly mark” the hologram. *Id.* Applicant submits that Hudson’s metallised hologram is an opaque, reflection-type hologram, and, as such, is not a semitransparent security element, as recited by Claims 1, 18 and 31. Consequently, Hudson fails to cure the deficiencies of both Phillips and Hoshino. Furthermore, Hudson fails to disclose a multilayer interference element that both produces a color shift effect and has gaps, as recited by Claims 1, 18 and 31. Instead, Hudson’s cuts are

³ See, e.g., Col. 3:57–61. (“Normally, the hologram forming layer 11a is formed by covering the light reflecting layer 11b with a sheet of polycarbonate resin which is extended or stretched during a fabrication process”).

located in his diffractive device 7, i.e., the metallised hologram, and not in a multilayer interference element.

Applicant therefore submits that none of the cited references, taken either singly or in combination, teaches or suggests all of the features recited by Claims 1, 18 and 31.

Accordingly, these claims are allowable. Claims 2, 6-8, 10-16, 39-42, depending from Claim 1, Claims 19, 20, 22-27, 29, 30, 43 and 44, depending from Claim 18, and Claims 32, 33, depending from Claim 31, are also allowable, at least for the reasons discussed above.

In view of the foregoing remarks presented herein, Applicant respectfully submits that this application is in condition for allowance and should now be passed to issue.

A Notice of Allowance is respectfully solicited.

If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

The Commissioner is hereby authorized to charge any fees and to credit any overpayments that may be required by this paper under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 02-2135.

Respectfully submitted,



By: _____

June 29, 2007

Rothwell, Figg, Ernst & Manbeck P.C.
1425 K Street, N.W., Suite 800
Washington, D.C. 20005
(202) 783-6040 (voice)
(202) 783-6031 (fax)

George R. Repper
Registration No. 31,414
Adam M. Treiber
Registration No. 48,000

#1410946_1